| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/654,949 | 09/01/2000 | Peter Brittingham | ETS-TCA | 7078 |

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| EXAMINER |
|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 3714 | |

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | **Application No.** | | **Applicant(s)** | |
|---|---|---|---|---|
| **Office Action Summary** | 09/654,949 | | BRITTINGHAM ET AL. | |
| | **Examiner** | | **Art Unit** | |
| | Chanda L. Harris | | 3714 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _23 June 2003_ .

2a)☐ This action is **FINAL.**        2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

| | | | |
|---|---|---|---|
| 1) ☒ Notice of References Cited (PTO-892) | | 4) ☐ Interview Summary (PTO-413) Paper No(s). _____ . | |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | | 5) ☐ Notice of Informal Patent Application (PTO-152) | |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | | 6) ☐ Other: . | |

# DETAILED ACTION

## *Specification*

1.     The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

2.     The use of the trademark Microsoft Word has been noted in this application. See page 13, line 15. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

## *Compact Disc Submission*

The description portion of this application contains a computer program listing consisting of more than three hundred (300) lines. In accordance with 37 CFR 1.96(c), a computer program listing printout of more than three hundred lines must be submitted as a computer program listing appendix on compact disc conforming to the standards set forth in 37 CFR 1.96(c)(2) and must be appropriately referenced in the specification (see 37 CFR 1.77(b)(4)). Accordingly, applicant is required to cancel the computer program listing appearing in the Visual Basic Source Code Appendix (VBSCA 1-469),

file a computer program listing appendix on compact disc in compliance with 37 CFR

1.96(c) and insert an appropriate reference to the newly added computer program listing

appendix on compact disc at the beginning of the specification.


## Claim Objections

1.      Claims 8 and 15 are rejected to because of the following informalities:  "he"

should be "the".  Appropriate correction is required.

2.      Claim 17 is objected to because of the following informalities:  "TCA" needs to be

defined prior to using it as an acronym (e.g. Test Creation Assistant (TCA)).

Appropriate correction is required.


## Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

1.      Claims 9-10 and 18 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.  It is not clear what exactly Applicant is trying

to claim by "the VISUAL BASIC SOURCE CODE" AND "the PROLOG SOURCE

CODE".  All claim limitations must be distinctly recited within the content of the claim

and not referred to in an Appendix.

2.      Claims 9 recites the limitations "the VISUAL BASIC SOURCE CODE " and "the

VISUAL BASIC SOURCE CODE APPENDIX" in lines 2-3.  There is insufficient

antecedent basis for this limitation in the claim.

3.      Claim 10 recites the limitation "the PROLOG SOURCE CODE" and "the

PROLOG SOURCE CODE APPENDIX" in lines 2-3.  There is insufficient antecedent

basis for this limitation in the claim.

4.      Claim 18 recites the limitations "the Prolog simultaneous constraint solver", "the

PROLOG SOURCE CODE" and "the PROLOG SOURCE CODE APPENDIX" in lines 2-

3.  There is insufficient antecedent basis for this limitation in the claim.


## Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-8, 11-16, and 19-20 are rejected under 35 U.S.C. 102(e) as being**

**anticipated by Owens et al. (US 6,315,572).**

1.      [Claims 1,5,7,14]: Regarding Claims 1,5, 7, and 14, Owens discloses obtaining a

test item.  See Col.9: 7-12.  Owens discloses identifying elements of the test item to be

variabilized (e.g. question component, question part component); variabilizing the

elements to create variables (e.g. holders); and defining the variables (i.e. define keys,

navigational pages, templates, holders, etc.).   See Col.10: 63-67.    Owens discloses

generating a test item variant using a simultaneous constraint solver (i.e. question

generation mechanism).  See Col.9: 12-15.  Owens discloses means (question

generation mechanism) for accepting the variabilized test item with defined variables as

a test item model (template).  See Col.8: 57-64.

2.      [Claim 2]: Regarding Claim 2, Owens discloses wherein said model creation

further comprises specifying constraints (e.g. conceptual relationships) that define the

relationship among the variables.  See Col.8: 57-64.

3.      [Claims 3-4]: Regarding Claims 3 and 4, Owens discloses accepting and

retrievably storing the test item variant and accepting and retrievably storing the test

item model.  See Col.9: 11-15 and Col.10: 27-29.

4.      [Claims 6,11,13, 16]: Regarding Claims 6,11, 13, and 16, Owens discloses

means (i.e. database) for retrievably storing test item models.  See Col.10: 27-29.

Owens discloses means for selecting a test item model (i.e. input means).  See Col.10:

30-37.  Owens discloses means for simultaneously solving the test item model

constraints (i.e. question generation mechanism) and means (i.e. question generation

mechanism or question generator) for generating test item solutions by simultaneously

solving the test item model constraints.  See Col.8: 57-63.  Owens discloses means for

displaying (i.e. display means, data store); accepting and retrievably storing valid test

item solutions and the test item model.   See FIG.1.

5.      [Claims 8, 15]: Regarding Claims 8 and 15, Owens discloses means (i.e.

question generation mechanism) for specifying constraints that define the relationship

among the variables.  See Col.8: 57-64.

6.      [Claim 12]: Regarding Claim 12, Owens discloses means for creating editing and

storing variabilized and non-variabilized test items; means for selectively variabilizing

test item elements; means for defining test item element variables (i.e. authoring

system).  See Col.7: 30-32.  Owens discloses means for simultaneously solving

variabilized test item element constraints (i.e. question generator).  Owens discloses

means for displaying (i.e. display means) and storing (i.e. data store) accepted test

items.  See FIG.1.

7.      [Claim 19]: Regarding Claim 19, Owens discloses wherein variables can be

defined by values (e.g. mule, deer, etc.) which are the variables.   See Col.9:  12-15.

8.      [Claim 20]: Regarding Claim 20, Owens discloses wherein the variables are new

variables for which new constraints (i.e. possible conceptual relationships) are defined

as needed.  See Col.8: 57-64.


### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

**Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owens.**

[Claim 17]: Regarding Claim 17, Owens does not disclose expressly using PROLOG IV and TCA constraint language. He does teach using a number of programming languages for use with many computer architectures or operating systems. See Col.25: 41-44. However, it would have been obvious to one of ordinary skill in the art that it would have been an obvious matter of design choice of what language to use in implementing the method set forth in the claims wherein no stated problem is solved or unexpected result obtained by using PROLOG IV and TCA constraint language.

### *Citation of Pertinent Prior Art*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- De Almeida Almeida (US 6,112,051)

    -random problem generator

- Sonnenfeld (US 6,112,049)

    -computer network based testing system

- Sugimoto (US 2002/0045155)

    -selecting target educational course

- Griswold et al. (US 5,890,911)

    -questions generated upon request

- Tatsuoka (US 6,301,571)

    -interacting with a test subject

- Dickmeyer (US 6,413,100)

    -delivering solutions to specific problems and problem types

- Sanchez-Lazer et al. (US 6,000,945)

    -computer based test assembly

- Driscoll et al. (US 6,442,370)

    -computer based test creation

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chanda L. Harris whose telephone number is 703-308-

8358. The examiner can normally be reached on M-F 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-872-9302 for

regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-308-

1148.

**DERRIS H. BANKS**
**SUPERVISORY PATENT EXAMINER**
**TECHNOLOGY CENTER 3700**

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ch.
June 23, 2003